
SUSTAINABLE LIVELIHOOD THINKING
AN APPROACH TO POVERTY, ENVIRONMENT AND DEVELOPMENT

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Summary Overview

This paper is part of a wider argument for breaking out from the ruts and traps of normal professionalism and 'first' thinking. It proposes sustainable livelihood thinking as an analytical and practical tool for approaches to environment and development.

On ethical grounds most would agree that the critical group of poor people, especially the rural poor of the third world, should be put first. The paper argues that even without this ethical justification, sustainable development can only be achieved through giving priority to livelihood security for the poor. Livelihood here means a level of wealth and of stocks and flows of food and cash which provide for physical and social wellbeing. This includes security against sickness, early death, and becoming poorer. Livelihood security is critical for environment and development because a: without it, poor people are driven to degrade the environment in order to survive; b: livelihood security is a precondition for stabilising human population; and c: a secure stake in resources for the poor is a condition for good husbandry by them with sustainable management and investment.

These justifications conveniently ignore the rich whose exploitation of natural resources so often drives the poor deeper into their unsustainable syndrome. To induce the rich and powerful to forego their short-term gains for long-term benefits for all requires countervailing forces, and analytical backing.

One analytical approach is to integrate three modes of thinking - environment thinking (ET) which stresses sustainability, development thinking (DT) which stresses production and growth, and livelihood thinking (LT) which stresses livelihoods for the poor. Sustainable livelihood thinking (SLT) promises such a synthesis, giving priority to sustainable livelihoods which enable people to take a long-term view. SLT is not an add-on to existing approaches; it is an alternative.

SLT has many analytical and practical implications. It affects the choice and design of development actions. It impinges on energy, agricultural research, and all types of rural development programme. It presents an opportunity for

a decisive contribution to the poor, to development and to the environment.
The question is whether that opportunity will be seen and seized.

Normal professionalism, 'First' Thinking and the WCED⁽¹⁾

Most of those with a concern for environment and development are likely to be unconscious victims of normal professionalism and 'first' thinking.⁽²⁾ Normal professionalism means the thinking, values, methods and behaviour dominant in a profession or discipline. The 'first' thinking which goes with it has a structure, traits and values generated by and serving the richer nations, and in all nations the urban, industrial and elite cores. In much normal professionalism and 'first' thinking, it is things, especially the things of the rich, which come first, while people come last, with the poorer rural people last of all.

The World Commission on Environment and Development (WCED) has usefully listed what it describes as the 'standard agenda' of key issues in environment as they have emerged over the past two decades (WCED 1985: 20-21). This agenda, which the WCED substantially modifies, reflects normal professionalism and 'first' thinking. None of the 24 items on the standard agenda starts with people, let alone with the poor. The key environmental pollution issues are concerned with physical things and conditions - CO₂, trace gases, climatic change, air pollution, acid rain, water pollution, hazardous waste, and so on. The key natural resource issues are again concerned with physical entities, inanimate and animate, such as loss of cropland, soil erosion, desertification, depletion of forests and loss of genetic resources. Even the key human settlements issues start not with people but with categories for things and services - land use and tenure, shelter, water supply and sanitation, social, health, education and other services, and "Managing Very Rapid Urban Growth - The Mega-City". Finally, the management issues are stated at a macro level and again use 'first' categories - environment and

international trade, environment and development assistance, environment and transnational corporations, and so on. None of the standard agenda items starts with people as they might have done - for example with pastoralists, female-headed households, the landless, those who rely on common property resources, forest-dwellers, or marginal and small farmers. Normal professional thinking does not start with people or categories of people like these, least of all with the poor. People come later, if at all, and often as residuals and problems after technical solutions have been sought and found to what are seen as antecedent physical problems.

In its critique of the 'standard agenda' (ibid:22-6), the WCED identified four limitations. These were: an approach of react-and-cure instead of anticipate-and-prevent; the tendency not to treat issues as jointly environment-and-development; the neglect of common causes of problems; and treating environmental considerations as an 'add-on' rather than as a comprehensive, horizontal policy field, an integral part of economic and social policy. Despite these criticisms, the alternative agenda which followed, and the WCED's working agenda which incorporated it, again followed normal professional lines. Those topics closest to people were expressed in general terms, which were both physical and 'first' such as:

Perspectives on Population, Environments and Sustainable Development,
Food Security, Agriculture, Forestry, Environment and Development
and Human Settlements: Environment and Development.

The alternative agenda did, however, pay more attention to people than did the earlier standard agenda. There are indeed references to human welfare and poverty. These are, however, at a general level: where people are mentioned,

they are usually considered as a whole and not differentiated into, say, richer and poorer.⁽³⁾ Nor does the mind-set revealed in the text appear to put people, or poor people, first. Measures to address the sources of acid rain

'would prevent further damage to property, water ecosystems, forests and human welfare. On the other hand, failure to address acid rain will have the reverse effects, with significant negative impacts on the capacity of the nations most affected to sustain higher levels of production and use'.

'Human welfare' does not distinguish rich from poor, comes at the end of the list in the first sentence, and does not appear at all in the second. Or again, in considering energy, it is written that unless effective measures are greatly accelerated in many developing countries to replenish fuelwood and other biomass sources, environmental degradation and poverty will increase. Poverty is thus mentioned, but is seen as a negative end product of a process rather than as the primary problem; and the energy crisis is seen as a problem, not as an opportunity for the poor to gain, as it might have had thinking started with them. Or again

'restrictions on access to markets for goods in which developing countries have a comparative advantage can not only slow down their development generally, thus extending poverty induced pressures on the environment, but also force them into the production of alternative

goods involving non-sustainable uses of land and other resources'.

Here the terminal bad effects are not poverty, but poverty-induced pressures on the environment, and non-sustainable uses of land and other resources. Or again, in mentioning downstream costs, they are listed as associated with damage to 'ecosystems, property and health', with health, the human element again coming last (ibid: 33). One is left with the impression that people have been added to existing lists, at the end; and sometimes they have not made the lists at all.

In making these points I do not wish to underestimate or undervalue the shifts in thinking which have taken place, and which are reflected in the official statements of the WCED. People and poverty have been brought more into consideration than before, and 'sustainable development' has been made central. But the WCED is a Commission on Environment and Development, and in presenting a modified version of 'first' thinking it is being true to its title which emphasizes things and processes rather than people. The argument of this paper is that it should be a Commission on Poor People, Environment and Development, putting poor people first; and that unless poor people, their needs, interests and priorities, are put first, the objectives for environment and for development will themselves not be attained.

Livelihood Security for the Poor

The basic grounds for putting the last first are ethical and not in serious dispute. The deprivation of hundreds of millions on our planet is seen as an outrage, an affront to our common humanity and a denial of common decency. Much of the rhetoric of development puts them first, and much of the debate is

not about ends but means. The main argument in this paper is about means, starting with the WCED objective of sustainable development. The thesis is that sustainable development can never be achieved unless the poor are put first.

To present this thesis, analysis starts with poor people and what they want. Poor people have many priorities, and their priorities vary from person to person, from place to place and from time to time. Health is often, if not always, one. In addition, a common and almost universal priority expressed is the desire for an adequate, secure and decent livelihood. Livelihood here can be defined as a level of wealth and of stocks and flows of food and cash which provide for physical and social wellbeing. This includes security against sickness, early death, and becoming poorer. Again and again, when they are asked, poor people give replies which fit these points. This is not the same as 'first' definitions of poverty and of poverty lines, which are concerned with flows only - with income or with outlays; for it also includes, what is very important to the poor, reserves which can be used to meet contingencies (of sickness, accidents, losses, sudden or major social needs, and so on). It includes, thus, secure command over assets as well as income, and good chances of survival. A phrase to summarise all this is livelihood security.

Livelihood security for the poor is critical for the environment and for development for three reasons.

The first concerns the environment. In their struggle to survive poor people are often driven to damage the environment with long-term losses. They are forced to cultivate and degrade marginal and unstable land; their herds overgraze; their shortening fallows on steep slopes and fragile soils induce

erosion; their need for off-season incomes drives them to cut and sell firewood and to make and sell charcoal. To prevent and draw off this pressure requires providing them with alternatives which they prefer. Putting poor people first, and enabling them to meet their needs in other ways is to reduce these pressures, to restrain degradation, and to conserve potentials for sustainable agriculture and sustainable development at present or higher levels of productivity.

Second, livelihood security is a precondition for stabilising human population. Part of the pressure on the environment comes from population increases, compounded by poverty. The problem is not just that some 800 million people are currently in a state of absolute poverty. If that were all, it would still daunt human will and ingenuity. The problem is also anticipated future growth. In the 17 years from 1983 to 2000 the population of Sub-Saharan Africa (SSA) is estimated to rise from 393 to 664 million, that is, by nearly 70 per cent (WDR 1985: 210), while Kenya's population is projected to double. ⁽⁴⁾ In the contemporary world, apart from recent catastrophies in such countries as Kampuchea, Uganda and Ethiopia, population has tended to grow faster where people are poorer, and is growing fastest of all in SSA where the environmental base is so often fragile and deteriorating. These difficulties are gravely compounded by the fact that the insecure and poor are sensible to have many children. It is rational for those who lack secure command over resources, and who expect some of their children to die, to have large families. This is both survival strategy and insurance. They need to spread risks and diversify their sources of food and cash, putting members in different activities and places, and relying on surviving children for support in old age. The more they expect their children to live, the more they command a decent living, and the more they can look forward to a secure

old age, the more sense it makes to parents to have fewer children. Good health and decent livelihoods are thus predisposing conditions for a stable population.

Third, a secure stake in resources is a condition for good husbandry, sustainable management, and investment. In this, poor people are no different from rich. All over the globe, communal arrangements for sharing are weakening, and nuclear families and individual rights to resources are becoming more prevalent. For the poor, as for the rich, short leases or insecure tenure prompt quick exploitation with little concern for long-term degradation. Tenants-at-will rarely plant trees. In contrast, long-term tenure encourages a long-term view and the investment of labour and funds in resource conservation and enhancement. Sustainable management only makes private economic sense when the long-term benefits can certainly be enjoyed. Investment for the long-term requires that the investment be safe, and that its fruits can be passed on from parents to children, for the poor no less than for the rich.

The Role of the Rich

The analysis so far conveniently ignores the rich. However valid it may be, the line of poverty-population-environment thinking fits neatly and comfortably into an elitist mindset which blames the poor for degrading their land and mismanaging their resources while diverting attention from the similar grosser acts of the rich. The poor, their primitive agriculture, their profligate cutting of trees, their irresponsible cultivation of steep slopes, and so on, are seen as culpable. Though victims, they are blamed.

And even if their actions as victims are sympathetically understood, it is still easy and convenient to focus attention on them and what they do, rather than on the rich and what they do, or cause to happen.

In fact, the rich are engaged on a massive scale in destroying and rendering less secure the livelihoods of the poor. They compete for and appropriate resources. Common land is enclosed and encroached by the wealthy. In Sub Saharan Africa, pastoralists' herds have increasingly passed into the hands of absentee urban elites. In India exploitation of forests has undermined or eliminated 'fibre livelihoods' in basket and rope-making (Bandyopadhyay 1986:3) and other livelihoods sustained by the myriad forest products used by people in or near the forest. Nor does deforestation generate substantial employment: Repetto (1986:22) has calculated that in Indonesia by 1988 more than 50 hectares per year would have to be logged to create one job. In several parts of the world, large-scale corruption among politicians and officials is involved in logging. One measure of the scale of illicit felling by and for the rich is from the Philippines. In 1980 Japan recorded timber exports from the Philippines over double the recorded exports (Repetto 1986:17). The balance passed not through the Philippines books but into the pockets of vested interests. The immense wealth of trees has been stolen more by the rich than by the poor; and even at the legal level, it is the consumption needs of the rich world which create the demand which devastates tropical forests.

Because the rich world, and the rich in the third world, do not put the rural poor first, they drive them deeper into their unsustainable syndrome. They maintain and intensify the conditions which force the poor to mine their environments and to have many children. They deny the poor the security of

ownership and rights to natural resources which would give them more incentive to take the long view. It requires a radical reversal of priorities, putting livelihood security of the poor first, to reverse these processes - reducing exploitation of marginal resources, stabilising population, and providing incentives for sound resource management. For this, it is from the rich and powerful that most of the initiative has to come.

This leads into questions of practical political economy, and whether there are solutions from which all can gain. If the rich would take a long view and a global perspective of human responsibility, they might see gains in exercising restraint. But any sane, humane and ecological approach, to borrow James Robertson's (1985) adjectives, is likely to entail short-term losses for the rich and powerful, meaning that they forego gains they would have had. To induce that acceptance requires many pressures and initiatives, not least by international bodies like the WCED and the IUCN and by the poor themselves and their allies. For this, one neglected dimension is the very structure of thinking and analysis of normal professionalism and of those who are 'first'.

Three Modes of Thinking: ET, DT and LT

Concerning environment, development, and poor people, three modes of thinking can be distinguished:

environment thinking (ET)

development thinking (DT)

livelihood thinking (LT)

To point the contrasts, a table helps, as follows:

	ET	DT	LT
the people concerned	normal biologists	normal economists	poor households
primary focus of concern	the environment	production	livelihoods
criteria in decision-making and evaluation	conservation of resources maintenance of diversity	economic growth productivity and economic returns	immediate satisfaction of basic needs security and low risk
time horizon	long	medium	short and long
value placed on the future	future valued more than present	future valued less than present	varying and conflicting. Both low and high
normal structure ends of thinking means			

The continuous arrows represent causal connections and directions emphasised in the way of thinking. The dotted arrows represent connections that are recognised but not stressed.

E = environment D = development L = livelihoods

ET and DT are both forms of 'first' thinking, manifestations of normal professionalism. When challenged, many with ET or DT mindsets will concede that of course people, and poor people, should come first, should be ends not means; but will then revert to their normal professional patterns of thought. In other respects ET and DT differ. Normal biologists emphasise the negative effects on the environment both of development and of poor people's livelihoods while normal economists value positive contributions to economic development and production from both environment (land, water, trees, crops etc) and labour (as aspects of livelihoods). ET takes the long view and values the future more than the present, whereas the DT of normal economists takes only a medium-term view and uses discounting of future benefits as in conventional social cost-benefit analysis.

Sustainability of development is identified by the WCED in Mandate for Change as one of its transcending themes. The term 'sustainable development' is used repeatedly, and serves to synthesise ET and DT. It embraces a human equity element as 'sustainable development (economic, social, health and education)' (WCED 1985 15). Indeed, equity is another of the transcending themes. But the thinking still basically starts with environment and development rather than people, and remains a manifestation of normal professionalism and first thinking, albeit with an increasingly human face.

In contrast to the familiar normality of ET, DT, and even sustainable development, LT entails a reversal or flip which at once alarms and exhilarates. When the priorities of the poor are the starting point, the elements in the analysis arrange themselves in a new pattern, and nothing is ever quite the same again. The priority is not the environment or production

but livelihoods, stressing both short-term satisfaction of basic needs and long-term security.

The time horizons of poor people need careful understanding. 'First' professionals often suppose that poor people cannot take a long view: when desperate for food or other basic needs, they will not save, and cannot be expected to. Whereas ET takes a long view, and DT a medium view, LT is then seen to take a short, indeed, very short, view. This is both true and false. Of course hungry people eat first and think about the future second. It is also true that below certain levels of living, high proportions of marginal increments to income are spent on food or other consumption. At such levels, people are vulnerable to deeper impoverishment, having to dispose of assets or take debts for consumption purposes. But it is misleading to generalise from these characteristics of the very poor and to argue that poor people cannot or will not stint or save for the future. Reluctance to limit family size takes the long view: in the short term, pregnancy and very small children are burdens and families would be better off without them: the benefits only come perhaps five or ten or more years later when the children become economically active. Investment in children's education similarly takes the longer view. The extraordinary tenacity with which poor peasants all over the world sacrifice in order to retain rights in land is another indication. What appears an inability to invest labour for the longer-term is often a rational recognition of insecurity: who will plant a tree who fears it will be stolen, or the land appropriated, or the household itself driven away at will? But many poor people with secure ownership, rights and access, can and do plant trees and can and do invest for the future once they can meet their basic subsistence needs.

Sustainable Livelihood Thinking

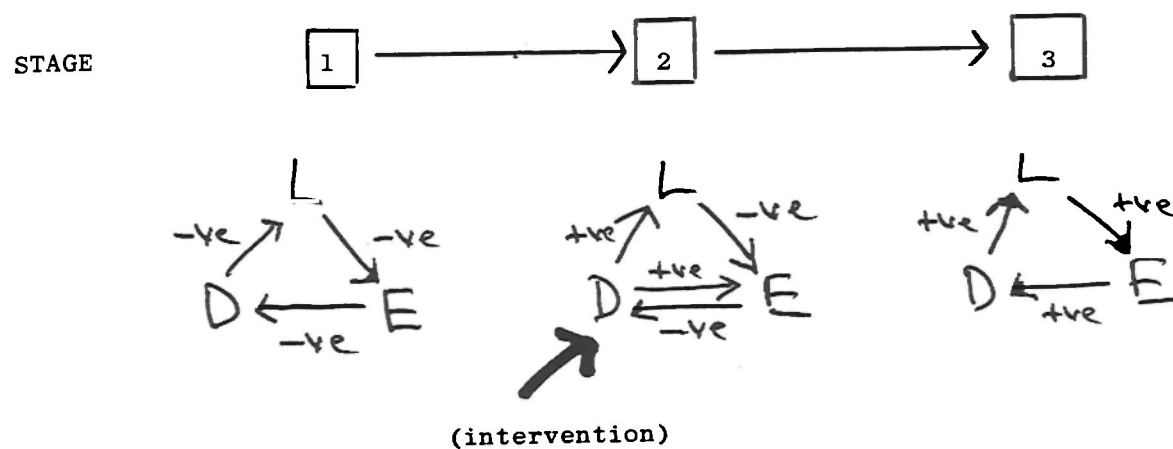
ET, DT and LT synthesise in what can be termed sustainable livelihood thinking (SLT). SLT takes sustainability from ET, linking with the need of the poor for long-term security for themselves and their children; productivity from DT, linking with the need of the poor for more food and incomes; and the primacy of poor people's livelihoods from LT.

SLT centres on enabling poor people to overcome conditions which force them to take the short view and live 'from hand to mouth', or 'from day to day'. It seeks to enable them to get above, not a poverty line defined in terms of consumption, but a sustainable livelihood line which includes ability to save and accumulate, to meet contingencies, and to enhance long-term productivity. SLT reverses thinking which flows from core to periphery, or from the top down and substitutes thinking from periphery to core, or from the bottom up. It sees sustainable development as achievable by securing more and more sustainable livelihoods for the critical group of the poor, thus stabilising use of the environment, enhancing productivity, and establishing a dynamic equilibrium, above the SL line, of population and resources. It seeks to create and maintain conditions in which poor people are less poor and see and work for benefits for themselves in sustainable development.

In development there have been a succession of 'add-ons' to existing methodologies and analytical approaches: with project appraisal, in succession, we have had impact on the poor, impact on the environment, and impact on women. It may be tempting to make sustainable livelihoods yet another 'add-on'. What I am proposing here is more radical: SLT not as add-on, but as alternative.

SLT looks intellectually exciting and practically promising. Strategies might

seek various sequences of change. One of the more important might be:



In this model, a vicious downward spiral, as say in the Sahel, has people exploiting an environment which becomes less productive and in turn diminishes their livelihoods. A solution is sought not through conservation but through development with a positive impact on livelihoods which, in turn, later become sustainable. Short-term improvements in living thus create conditions for later livelihood-intensive and sustainable human use of the environment.

Analytical and Practical Implications of SLT

SLT has many analytical and practical implications which need working out. An initial list of some of the more important follows:

i. sustainable livelihood-intensity (SL-intensity)

SL-intensity becomes a key criterion in identifying and assessing proposals and actions for environment and development. It subsumes and amalgamates ET's sustainability, DT's productivity, and LT's satisfaction of needs.

SL-intensity is linked to political economy and who gains and who loses. In project appraisal it will usually give different results to conventional

cost-benefit analysis. For example, evaluated in net SL terms, the activities of transnational corporations and logging contractors will often be negative, or lower than alternatives.

ii. security, reserves and buffers

Sustainable livelihoods include security against impoverishment. This requires ability to deal with contingencies. The 'flow' approaches of normal anti-poverty programmes like the Integrated Rural Development Programme in India, do not include this. They are concerned with increasing the incomes and consumption of the poor, not their security. But reduced vulnerability and ability to withstand shocks are essential to an adequate, secure and decent livelihood. Without such ability, a livelihood has low sustainability. The very strategies used by the poor to handle contingencies, such as borrowing at high interest rates from money lenders, can entail vulnerability and not be sustainable. One element, therefore, in a sustainable livelihood will often be assets which assure independence because they can be used to meet contingencies. Physical assets (livestock, jewellery, cash, trees, land, household equipment...) then substitute for dependent social and economic relations.

iii. 'hedgehogs', 'foxes' and sustainable livelihoods

At the risk of causing distress to biologists, let me quote the proverb of Archilochus. 'The fox knows many things, but the hedgehog knows one big thing'. Poor people's strategies can be understood as those of hedgehogs, with one big thing, or of foxes, with many things (Chambers 1983:142-3). Hedgehogs are dependent on one source of livelihood: in urban areas they have

a 'job', or in rural they have one activity like weaving, or being a bonded labourer, which locks them in to a single source of support. Hedgehogs (to mix metaphors and distress biologists even more) have all their eggs in one basket. Foxes, in contrast, have multiple sources of income and food as their livelihood strategy - cultivating, working as labourers, migrating, hunting and gathering on commons, artisan work, providing services, petty hawking, and so on. Many hedgehogs subsist in conditions which they and others consider intolerable. But many foxes can also be desperate at some times of the year. 'First' approaches to rural and agricultural development often seek to turn foxes into hedgehogs, with 'jobs' and 'employment'. SL approaches, however, would often seek to strengthen and stabilise foxes' current strategies. Moreover, the strengthening or introduction of one additional enterprise in a household which already has several can have high SL-intensity, by enabling it to move up above a livelihood line.

N. professional reorientation: energy, and agricultural research

SLT entails professional reorientation. The practical implications are many. Two examples are energy and agricultural research.

First, the energy crisis has been perceived as a problem for the rich and urban rather than as an opportunity for the poor and rural. But growing, harvesting and selling energy (notably but not only as firewood), can be highly SL-intensive and represents a chance for sustainable livelihoods for many of the rural poor. This has not been a part of 'first' professional thinking.

Second, agricultural research is reoriented by SLT. Sustainability forces a

long-term view of the productivity of a farming system. Livelihood-intensity directs attention to labour requirements round the year and to wages. Much farming systems research treats labour requirements as a constraint, a cost. Livelihood-intensity puts it on the other side of the equation, as a potential benefit through productive and remunerative work.

v. types of action

Types of action with high SL-intensity will vary by environment, for example as between core poverty - where poor people are found in accessible areas of intensive agriculture and dense population, and peripheral poverty - where poor people are found in areas which are remote and marginal. SL-intensive approaches to core poverty are likely to include homestead gardening, rights to trees, access to common and private property resources, labour-demanding farming systems to generate work and wages, and irrigation to provide productive work round more of the year. With peripheral poor, SL-intensive approaches are likely to concern marginal farming, crops and livestock, water harvesting, soil retention and fertility enhancement. With SL-intensity as a criterion, each human group and environment will generate its own mix of actions which fit.

Final Questions

SLT integrates the priorities of the poor with the concerns of environment and development. It challenges much normal thinking. It confronts the priorities of many of the rich and is neither comfortable nor easy. It may be too difficult, discordant, or threatening for most normal professionals. But its reversals and flips of thinking are exciting and open up new intellectual and

practical terrain.

In SLT an idea whose time has come?

Could it be part of a new professionalism which, putting the last first now,
in the long term serves all?

Will anyone develop its theory and practice?

- (1) For comments and discussion which have contributed to this revision of an earlier paper I am grateful to Martin Greeley, Martin Holdgate, Michael Lipton, Mick Moore, M.S. Swaminathan, Lorian Thrupp, and members and the secretariat of the Advisory Panel on Food Security, Agriculture, Forestry and Environment of the World Commission on Environment and Development. Responsibility for the views expressed and any errors is mine.
- (2) The two concepts 'normal professionalism' and 'first' thinking" are elaborated and analysed in two other papers (Chambers 1985b and c). The treatment here is summary. Any reader who finds this unsatisfactory is requested to write to me at Institute of Development Studies, University of Sussex, Brighton BN1 9RE. We will send these two papers if possible.
- (3) For the sake of brevity and clarity, I shall use the two categories 'rich' and 'poor' in this paper. The reader is asked to remember that these involve very gross simplifications. 'Poor' refers mainly to the rural poor or the Third World, and 'rich' mainly to 'developed' countries and to Third World, mainly urban, elites.
- (4) The impoverishing effects of population pressure were curiously out of fashion and neglected by social scientists generally in the 1960s and 1970s but this has changed. Its powerful effects can, however, no longer be denied. Thus "in Kenya, the dominant feature is pressure of population on land. The subdivision of land has been rapid in many areas. Estimates suggest that hectares of good agricultural land per person will drop dramatically: in Kiambu and Machakos Districts, halving from 1969 to 1989, from 0.40 and 0.36 to 0.20 and 0.18 hectares per person respectively (Livingstone 1981, vol. 2:5). However, the single most important way in which population pressure has been absorbed is spontaneous rural to rural migration, which is more significant than rural to urban. It has been marked in the past decade as families have moved in search of land. Evidence (Migot-Adholla cited in Livingstone 1981, vol. 2:14) indicates that those who move have come over time from less poor sections of the community than before. As Livingstone observes, 'Given the inevitable increase in land pressure, and the associated poverty, it is evidently serious if it requires wealth to migrate, since the poverty of those remaining will tend to be reinforced' (Livingstone 1981, vol. 2:14). Much of the migration has been to semi-arid regions where unstable and risky agriculture competes with and displaces pastoralists." (Chambers, 1985a).

References

- Bandyopadhyay, J. 1986 "Rehabilitation of Upland Watersheds", paper for the World Commission on Environment and Development, Geneva
- Chambers, Robert 1983 Rural Development: Putting the Last First, Longman, Harlow.
- Chambers 1985a, 'The Crisis of Africa's Rural Poor: perceptions and priorities', IDS Discussion Paper, No. 201, Institute of Development Studies, University of Sussex, Brighton BN1 9RE, February.
- Chambers, Robert 1985b 'Putting 'last' thinking first: a professional revolution', in Raana Gauhar (ed.) Third World Affairs 1985, Third World Foundation for Social and Economic Studies, London, pp. 78-94.
- Chambers, Robert 1985c 'Normal Professionalism, New Paradigms and Development', paper for the Seminar on Poverty, Development and Food: Towards the 21st Century, in honour of the 75th Birthday of Professor H.W. Singer, Institute of Development Studies, University of Sussex, Brighton BN1 9RE, December 1985.
- Livingstone, Ian 1981 Rural Development, Employment and Incomes in Kenya, Report prepared for the ILO Jobs and Skills Programme for Africa, ILO, JASPA, Addis Ababa.
- Migot-Adholla, S.E. Migration and Rural Differentiation in Kenya, Ph.D Dissertation, University of California, Los Angeles.
- Repetto, Robert 1986 "Creating Incentives for Sustainable Forest Development", paper for the World Commission on Environment and Development in Geneva.
- Robertson, James 1985 Future Work: Jobs, self-employment and leisure after the industrial age, Gower/Maurice Temple Smith, Aldershot, England.
- WCED 1985 Mandate for Change: key issues, strategy and workplan, World Commission on Environment and Development, Geneva, August.
- WDR 1985 World Development Report 1985, Oxford University Press.